

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

ENDOCERVICITIS

•R. GLENN CRAIG, M. D. (490 Post Street, San Francisco).—*Etiology and Pathology.* Endocervicitis, as the word is commonly used, refers to infection of the glands of the cervix. In the normal nulliparous cervix, the squamous epithelium which lines the vagina extends over the external or exposed portion of the cervix and for a short distance up the cervical canal, sometimes a third or half the distance from the external os to the internal os. This stratified squamous epithelium is the same as that of the skin, with the exception that it does not contain hair follicles or sweat glands. Most infections of the skin begin either in the sweat glands or hair follicles, and because of their absence, the squamous epithelial covering the cervix affords a better protection against external infection than the skin. When this squamous epithelium does not completely cover the exposed portion of the cervix, the columnar epithelium lining the cervix and the cervical glands are exposed to infection from the vaginal bacterial flora, and they offer very little resistance to infection. When this condition exists, the cervix gives a red, shiny appearance, rather than the white, shiny appearance of the squamous epithelium. For this reason it has been erroneously called an erosion. Erosions are uncommon, as it is unusual for an ulceration or absence of the epithelium layer to exist. It is, perhaps, better called an ectropion or eversion of the cervical mucosa. Infection of the cervical glands may occur high up in the cervix, despite the presence of a satisfactory covering of squamous epithelium.

In a nulliparous woman, there may be an insufficient amount of squamous epithelium covering the cervix, with the resultant infection of the cervical glands from the ordinary bacteria of the vaginal flora, resulting in an increased irritation with excessive glandular secretions and the clinical symptom of leukorrhea. Gonococcal infections usually involve the cervix, and because of the racemose type of gland present, are most persistent in this location. Either specific or non-specific infections of these glands may occur with a sufficient amount of squamous epithelium present.

The most common type of endocervicitis is that present in multiparous women. The causative organism is usually a non-specific organism from the bacteria flora, commonly the *Bacillus coli*. The birth of the child, with the passage of the head down through the cervical canal, results in an eversion or ectropion, or pushing out, of the cervical mucosa, thus making an infection of the glands easy and frequent. For this reason leukorrhea following childbirth is so common that it is usually considered by women to be a normal condition.

A chronic irritation, produced by the persistent infection, causes overstimulation of the glands and an excessive secretion of mucus material usually containing polymorphonuclear leukocytes. It is becoming more and more firmly established that carcinomata arise in areas where a chronic irritation is maintained over a long period of time. It is also believed that the most common site of a squamous cell carcinoma is at a mucocutaneous junction. Carcinoma of the cervix is one of the most important types of "cancer" in women, and it is believed that the chronic irritation at the muco-cutaneous junction presents a major factor in the etiology of the squamous cell cancer of the cervix, particularly if there is a familial predisposition to cancer. The evidence is accumulating that a cervix properly cared for after childbirth rarely develops carcinoma of the cervix. For this reason it is believed that more attention to chronic infection of the cervix, or endocervicitis, is essential if we are properly to take care of our patients and to lower the incidence of this type of carcinoma. In any case, the patient is usually grateful for being relieved of her symptom of leukorrhea.

All efforts in the treatment of this condition are directed toward the removal or destruction of the infected cervical glands and covering completely the exposed portion of the cervix with the infection-resistant stratified squamous epithelium. The same purpose may be accomplished with the actual electric cautery, electrocoagulation or the Sturmdorff amputation of the cervix. It would be much better if the physician who takes care of a patient during childbirth would see that she is left with an uninfected cervix well covered with stratified squamous epithelium. The use of a small nasal wire cautery tip applied two or three months after the birth of the child accomplishes this purpose most satisfactorily. The same procedure can be carried out if there is a congenital insufficient covering of the cervix with the stratified squamous epithelium.

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H. N. SHAW, M. D. (901 Pacific Mutual Building, Los Angeles).—*Symptoms and Diagnosis.* Endocervicitis is considered one of the most common and potent causes of cancer of the cervix. It occurs most commonly as a result of gonorrheal or nonspecific infection of the mucosa and cervical glands. Some degree of laceration is inevitable in delivery, and such an injury renders the cervical mucosa and glands liable to a low-grade inflammation. The inflammation of the endocervix causes a rolling out and eversion of the mucosa. This occurs in the nulliparous cervix also, as the only direction in which the swollen tissue can expand.

The most common symptom is a profuse, glairy, mucous or mucopurulent discharge. This may or may not be irritating, causing an inflammation of the adjacent parts. It varies in color, depending on the causative organism; occasionally it is blood-streaked. Bloody discharge is suggestive of the very rare tuberculous infection, but beginning cancer must also be ruled out. A symptom often complained of is a sense of bearing down, or weight, in the pelvis.

Diagnosis.—The examining finger feels a soft, cushiony surface, often with hypertrophy of the entire cervix. On inspection with the speculum, one sees a swollen, everted mucosa covered with mucus or mucopus. There may be ulcers or, where larger amounts of tissue have sloughed, true erosions.

The gonococcus should always be suspected. Unfortunately, the smears may not demonstrate the organisms, as they may be closed off in the deep racemose glands. Sometimes they may be demonstrated by making smears immediately after the close of a menstrual period, or by lightly cauterizing with a Post cautery, and making smears the following day. Ulcers should be examined for *Spirochaete pallida* by darkfield preparations, as 1.5 to 2 per cent of primary luetic lesions occur on the cervix. Primary tuberculosis is very rare, probably due to direct implantation in coitus. It may cause scattered ulcers, tubercles or excessive granulation tissue. It should be suspected when the tissue removed for biopsy is unusually firm.

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GEORGE JOYCE HALL, M. D. (1127 Eleventh Street, Sacramento).—**Treatment.** The predisposing and causative factors entering into the question of endocervicitis make it necessary to consider both mechanical and bacterial involvements in planning treatment, so that the various methods of treatment in use today include, first, medical and topical applications; second, surgical repair or removal of abnormal tissue; and third, the use of heat as available in the actual cautery, "electric knife," or diathermy destructive applicator.

I will admit that there is often need of vitamin, hormone and calcium therapy, and that the general blood picture is not just as we would like it; but in this short discussion only the local methods of treatment will be considered.

Medical and Tropical Applications.—In preparing the field for local treatment, we use one of the digestant powders or solutions to clear away the thick tenacious mucus; either caroid, lactopeptin or peptenzyme powder used in atomizers. This is followed by plain water and thorough drying, when there results a clean surface of cervix and vagina. Then any of the germicidal solutions, including metaphen, hexylresorcinol, merthiolate, acriflavine, mercurochrome or Berwick's bacteriostatic solution may be used on swabs, or preferably through an atomizer. Each of these has its advocates, and all are quite helpful. Placing any of these solutions in the cervical canal, however, is only a temporary measure, and irrespective of the "penetration" qualities claimed for them, we know by years of experience that they do not cure

the condition. The foreign protein therapy has been disappointing.

Surgical Treatment.—The large congested lacerated cervix with extensive eversion responds well to the classical Sturmdorf tracheloplasty. This is an excellent method: is easily done, the patient is very comfortable and the results should be uniformly excellent. In my opinion, however, this requires a longer period of rest in bed after operation than some of the other methods. In this type of case the treatment is greatly simplified by surgically removing the cone of diseased tissue and cauterizing or electrocoagulating the resultant raw surface, instead of doing the classical Sturmdorf suturing.

I consider cervical amputation so rarely indicated that it deserves no place in this short résumé of treatment.

Cautery, Diathermy and Radio Knife.—All of these may well be classified as surgical methods, but are grouped separately for convenience of discussion.

The use of the actual cautery is to me the method of choice. My series of cases goes back to 1921, at which time I began using the post cautery very, very carefully—at first with a general anesthetic, and later with local anesthesia or none at all. The mild case of endocervicitis without severe laceration is treated entirely as an office procedure and rarely need an anesthetic be used.

The technique includes the preparation of the field as mentioned above. Then the large Percy, or post cautery, is inserted cold into the cervical canal up to the internal os; is withdrawn slightly, and the electric current turned on. Patients who have passed through a normal labor will uncomplainingly permit the cautery to remain for the period of time required; but those who are very sensitive are prepared by using a few cocain crystals in the cervical canal, or solutions of novocain or nupercain on applicators. Usually it requires less than one minute to cause a whitening of the visible tissue surrounding the cautery, and at about this time the cautery can be removed. There will be noticed a whitish covering of the cautery which is, of course, the superficial layers of the cervical mucous membrane. No effort is made to burn long enough to get charring; this is not necessary in these office treatments, and often this one application of heat is sufficient.

It generally requires from two to four weeks for healing to be complete. As a consequence, if given a choice, we prefer cauterizing a few days after menstruation has ceased.

In the type of case that would require a Sturmdorf tracheloplasty, a general anesthetic is used. The cylindrical water cooled vaginal specula of various sizes are very helpful in protecting the vaginal walls, although the speculum and retractors may be used safely. The vaginal speculum presented last year by E. F. McLaughlin of Philadelphia seems to me to be the most rational one yet devised for this purpose. If two cautery outfits are available it hastens the work because the tip cools rapidly in doing the deep destruction. An effort is made to destroy the same amount of tissue as would have been done with a knife in the

Sturmdorf technique. This is really very rapidly accomplished, and no effort is made to close over the raw surface resulting.

The very hot cautery, if permitted to remain in the cervical canal too long, causes a great deal of steam to be formed and a portion of this naturally enters the uterine cavity, so that one may easily visualize much damage that might be done to the endometrium and tubal epithelium if the operator is not cautious. We remove the cautery completely every few seconds. Someone has devised an ingenious cautery, with a canal in the center, which is supposed to permit the steam to come out if under too much pressure. I have had no experience with it.

It seems proper to mention here the method of "stripping" with the nasal cautery so frequently mentioned in literature. I consider this method unsurgical, unsatisfactory and incomplete. The percentage of cures is so low that it is entirely unjustified whether the actual cautery or some form of "electric knife" is used.

Some operators object to the actual cautery because of the undetermined penetration of heat and the length of time required. This is due, of course, to lack of experience.

In one of my early cases there was an epithelization of the external os found at the beginning of the menstrual period three weeks later. This was easily punctured with a sound and no further disturbance occurred. There have been no other strictures found in my series in twelve years.

After cauterization there is a gradual sloughing of the destroyed deeper layers, and our patients are permitted to use daily, cold, normal saline douches. During healing there is a contracting, shrinking effect which "puckers" the cervix until it becomes normal in size and appearance. No method of using a knife gives as normal appearing results as does the actual cautery.

"Electric Knife."—This long, needle-like instrument may be used to obtain a very pretty removal of the same amount of tissue as is done in Sturmdorf's tracheloplasty. But if a "cuff" is not prepared to permit epithelization, no effort should be made to cover over the raw surface; rather, it should be left as is done with the cauterization, and will leave a small rounded cervix rather than a nodular one which would naturally follow any effort to suture.

Electro-coagulation.—Various electrodes have been made to use on different electrosurgical or diathermy units for the purpose of destroying the abnormal tissue in the cervical canal. This method, when properly carried out with an applicator that "fills" the cervical canal, will give almost universally good results. It, again, is simple and may be used as an office procedure as described in the cautery technique.

Conization of the Uterine Cervix.—Hyams' development of this method, considered by many a great improvement over the uncontrolled cautery and coagulation destruction, is truly a nice procedure. His technique is simple and the results are excellent. There is more bleeding after conization than after cauterization, and there is also

the occasional failure to destroy all of the infected glands, which requires a repetition at a later date; but such things should not prevent the operator from becoming experienced with any and all methods so that he can better choose the modality which might seem indicated in any individual case. No one method, in my opinion, is indicated in all types of cases.

Prognosis.—Endocervicitis is curable, whatever the cause may be. The time-duration under treatment varies with the etiologic organism and the acuteness or chronicity of the inflammation. The above-mentioned methods of treatment shorten the time very materially. The diseased tissue must all be removed. If the adjacent portions of the genital canal are not also involved, healing will take place in from ten days to four weeks, and the cure is accomplished.

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The Title of Doctor of Medicine in Danger.—In France, the title of doctor is bestowed by the facultés de lettres, the facultés de droit and the facultés de sciences, as well as by the facultés de médecine. But in current speech the title doctor is commonly reserved to doctors of medicine. When one speaks of doctor, without further qualification, only a physician is meant. For this reason, persons desiring to practice medicine illegally always seek to procure a doctor's title given by some other institution in order to create confusion in the public mind. The pharmacists, most of whom prescribe illegally to the public frequenting their shops, have finally succeeded in getting a doctor's diploma established, with which they make considerable showing before their clientele. But the law requires them to state plainly that they are doctors of pharmacy. There are also doctors of veterinary medicine, some of whom likewise seek to deceive the public. The diploma of veterinarians must, however, be bestowed by a faculté de médecine before an examining board comprising professors of physiology, bacteriology, hygiene and materia medica, together with professors of a recognized large veterinary school. Here, too, the law requires that the holder of the veterinary title shall announce himself as a "doctor of veterinary medicine"; but that fact does not prevent him, if occasion arises, from giving consultations to the public, which applies to him the term "doctor." The dentists who have not pursued medical studies are also seeking to get a doctorate of dental science established, but this far the dentist-physicians have succeeded in preventing this and have suggested that, on the contrary, the practice of odontology be reserved solely to doctors of medicine who have received special supplementary instruction. The syndicates of the dentist-physicians and the syndicates of the nonmedical dentists are at loggerheads, both having powerful political allies, while the minister has not found it convenient to tackle the question. More serious trouble has arisen. A group of practitioners of dental electroradiology has established a technical school, which also is granting a doctor's diploma, and the holders, without having pursued medical studies, can easily practice medicine illegally by treating patients directly, without the latter having been so much as seen by a doctor of medicine, as the law requires. The medical syndicates have protested against this growing abuse; but not only does the minister fail to take account of their protests, but the syndicate of the dental radiologists even went so far as to organize an official dedication of the school, at which the various ministers, the municipal council of Paris, and the prefect of police, not comprehending the situation, were represented by delegates, who delivered a number of addresses in praise of the new institution and the services it was rendering the people. Thus, in France, they simply encouraged the illegal practice of medicine.—*News Letter, J. A. M. A.*, Vol. 101, No. 12.